

**Listing of Claims:**

1. (currently amended) An apparatus comprising:  
a decode unit which receives a first encoded interlaced video signal including encoded interframe motion compensation data, and responsively transmits a decoded interlaced video signal and associated interframe motion compensation data; and  
a de-interlace unit which converts said first interlaced video signal to a first progressive video signal by using the interframe motion compensation data to detect an image region moving faster than a threshold rate, and reconstructing said region using only the odd or the even rows of said interlaced signal, ~~and which, responsive to said interframe motion compensation data, selects a region of said first interlaced video signal for a different type of conversion, said selection based on the change in position of said region between successive video frames.~~
2. (original) The apparatus as claimed in claim 1 wherein said encoded first interlaced video signal is an MPEG-2 signal.
3. (original) The apparatus as claimed in claim 1 wherein said encoded first interlaced video signal is an MPEG-1 signal.
4. (original) The apparatus as claimed in claim 2 further including a scaling unit which converts said first progressive video signal to a second progressive video signal at a different resolution.
5. (original) The apparatus as claimed in claim 4 wherein said first interlaced signal is a standard television signal and said second progressive video signal is an HDTV signal.
6. (original) The apparatus as claimed in claim 5 wherein said standard television signal is a 480i signal and said HDTV signal is a 720p signal.

7. (original) The apparatus as claimed in claim 5 wherein said standard television signal is a PAL standard video signal and said HDTV signal is a 720p signal.

8. (original) The apparatus as claimed in claim 4 wherein said first interlaced signal is an HDTV signal and said second progressive video signal is an HDTV signal.

9. (original) The apparatus as claimed in claim 8 wherein said interlaced HDTV signal is a 1080i and said progressive HDTV signal is a 720p signal.

10. (currently amended) The apparatus as claimed in claim 4 further including an interlacer unit which converts said second progressive video to a second interlaced video signal.

11. (original) The apparatus as claimed in claim 10 wherein said first interlaced signal is a standard television signal and said second interlaced video signal is an HDTV signal.

12. (original) The apparatus as claimed in claim 11 wherein said standard television signal is a 480i signal and said HDTV signal is a 1080i signal.

13. (original) The apparatus as claimed in claim 11 wherein said standard television signal is a PAL standard video signal and said HDTV signal is a 1080i signal.

14. (original) The apparatus as claimed in claim 10 wherein said first interlaced signal is an HDTV television signal and said second interlaced video signal is a standard TV signal.

15. (original) The apparatus as claimed in claim 14 wherein said standard television signal is a 480i signal and said HDTV signal is a 1080i signal.

16. (original) The apparatus as claimed in claim 14 wherein said television signal is a PAL standard signal and said HDTV signal is a 1080i signal.

17. (currently amended) A method comprising the steps of:  
receiving an encoded interlaced video signal including encoded interframe motion compensation data, said first interlaced video signal comprised of data for generating an interlaced video image, and said encoded interframe motion compensation data identifying motion of a region of said interlaced video image;  
separating said interframe motion compensation data from said interlaced video signal;  
de-interlacing said region of said interlaced video image ~~using a first de-interlace technique~~ by selecting only the even or the odd rows of an interlaced video image region in response to said interlaced region having changed in position between successive video frames by at least a particular distance; and  
de-interlacing the remaining portions of said interlaced video image using a ~~second de-interlace technique~~ both odd and even rows of said interlaced video signal.

18. (original) The method as claimed in claim 17 wherein said encoded interlaced video signal is an MPEG-2 signal.

19. (original) The method as claimed in claim 17 wherein said encoded interlaced video signal is an MPEG-1 signal.

20. (cancelled)

21. (currently amended) The ~~apparatus~~ method as claimed in claim 20 ~~17~~ including the step of interpolating between said selected even or odd interlaced rows to fill, respectively, the missing odd or even interlaced rows.

22. (currently amended) The ~~apparatus~~ method as claimed in claim 17 further including the step of scaling said de-interlaced region of said first interlaced image and said remaining de-interlaced portions of said interlaced image to a first progressive video signal at a different resolution.

23. (currently amended) The ~~apparatus~~ method as claimed in claim 22 wherein said first interlaced signal is a standard television signal and said first progressive video signal is an HDTV signal.

24. (currently amended) The ~~apparatus~~ method as claimed in claim 23 wherein said standard television signal is a 490i signal and said HDTV signal is a 720p signal.

25. (currently amended) The ~~apparatus~~ method as claimed in claim 23 wherein said standard television signal is a PAL standard video signal and said HDTV signal is a 720p signal.

26. (currently amended) The ~~apparatus~~ method as claimed in claim 22 wherein said first interlaced signal is an HDTV television signal and said first progressive video signal is a standard definition signal.

27. (currently amended) The ~~apparatus~~ method as claimed in claim 26 wherein said standard television signal is a 480i signal and said HDTV signal is a 720p signal.

28. (currently amended) The ~~apparatus~~ method as claimed in claim 26 wherein said standard television signal is a PAL standard video signal and said HDTV signal is a 720p signal.

29. (currently amended) The ~~apparatus~~ method as claimed in claim 22 further including the step of interlacing said first progressive video into a second interlaced video signal.

30. (currently amended) The ~~apparatus~~ method as claimed in claim [[26]] 29 wherein said first interlaced signal is a standard television signal and said second interlaced video signal is an HDTV signal.

31. (currently amended) The ~~apparatus~~ method as claimed in claim 26 30 wherein said standard television signal is a 480i signal and said HDTV signal is a 1080i signal.

32. (currently amended) The ~~apparatus~~ method as claimed in claim 26 30 wherein said standard television signal is a PAL standard video signal and said HDTV signal is a 1080i signal.

33. (currently amended) The ~~apparatus~~ method as claimed in claim 22 29 wherein said first interlaced signal is an HDTV television signal and said second interlaced video signal is a standard definition signal.

34. (currently amended) The ~~apparatus~~ method as claimed in claim 33 wherein said standard television definition signal is a 480i signal and said HDTV signal is a 1080i signal.

35. (currently amended) The ~~apparatus~~ method as claimed in claim 26 33 wherein said standard television definition signal is a PAL standard video signal and said HDTV signal is a 1080i signal.

36. (cancelled)

37. (currently amended) The apparatus as claimed in claim 10 wherein said de-interlace unit interpolates between said selected even or odd interlaced rows to fill, respectively, the missing odd or even interlaced rows.

38. (currently amended) A method for converting an encoded video signal comprising the steps of:

determining a source video data type encoded in said encoded video signal;

determining whether said source video data type is one for which interframe motion compensation data should be for conversion;

selecting a particular frame rate conversion ratio if said source video data type ~~may be converted~~ is capable of conversion without use of said interframe motion compensation data; and

using said frame rate conversion ratio to convert each frame of said source video data type to one or more frames of destination video data type.

39. (original) The method for converting an encoded video signal as claimed in claim 38 wherein said encoded video signal is an MPEG-2 signal.

40. (original) The method for converting an encoded video signal as claimed in claim 38 wherein said encoded video signal is an MPEG-1 signal.

41. (original) The method for converting an encoded video signal as claimed in claim 38 including the additional step of using said interframe motion data for conversion if said source video data type is one for which interframe motion data should be used.

42. (original) The method for converting an encoded video signal as claimed in claim 41 wherein said interframe motion compensation data is used to identify regions of said source video data type which are in motion. |

43. (currently amended) The method for converting an encoded video signal as claimed in claim 42 including the additional step of converting said identified regions ~~using a different conversion technique from the remaining portions of said source video data type~~ by selecting only the even or the odd rows of said identified regions and interpolating between said selected even or odd interlaced rows to fill, respectively, the missing odd or even interlaced rows.

44. (original) The method for converting an encoded video signal as claimed in claim 43 wherein said source video data type is an interlaced video data type and said destination video data type is a progressive video data type.

45. (original) The method for converting an encoded video signal as claimed in claim 44 wherein said interlaced video data type is a 480i standard definition television signal.

46. (original) The method for converting an encoded video signal as claimed in claim 44 wherein said interlaced video data type is a PAL format standard definition television signal.

47. (original) The method for converting an encoded video signal as claimed in claim 44 wherein said interlaced video data type is a 1080i format HDTV signal.

48. (original) The method for converting an encoded video signal as claimed in claim 38 wherein said source video data type is a 24 frame/second movie encoded as a 480i standard definition video signal.

49. (original) The method for converting an encoded video signal as claimed in claim 48 wherein said destination video signal is a 60 frame/second signal.

50. (currently amended) An apparatus comprising:  
a decode unit which receives an encoded interlaced video signal including encoded interframe motion compensation data, and responsively transmits a decoded interlaced video signal and associated interframe motion compensation data; and

a de-interlacer, which converts said interlaced video signal to a progressive scan video signal, responsive to detecting in said interframe motion compensation data from a compressed video signal an interlaced region that has changed in position between successive video frames by at least a particular distance, reconstructs said interlaced region using only the odd or the even rows of said interlaced video signal.

51. (cancelled)

52. (cancelled)

53. (new) The apparatus of claim 1 wherein said de-interlace unit interpolates between said selected even or odd interlaced rows to fill, respectively, the missing odd or even interlaced rows.

54. (new) The apparatus of claim 50 wherein said de-interlacer interpolates between said selected even or odd interlaced rows to fill, respectively, the missing odd or even interlaced rows.

55. (new) The apparatus of claim 50 wherein said de-interlacer de-interlaces the interlaced video signal outside said interlaced region using both odd and even rows of said interlaced video signal.